

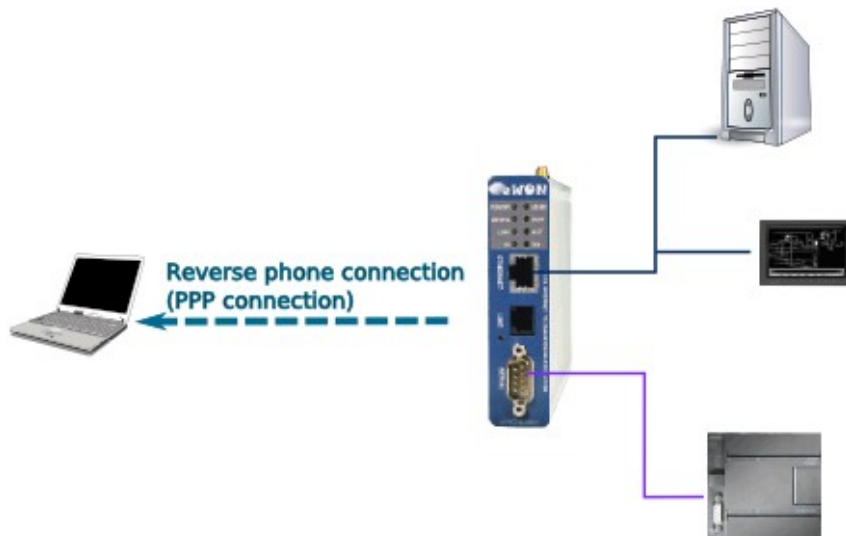
eWON Application User Guide

AUG 14 / Rev 1.0



You Select, We Connect

eWON - Reverse Phone Connection How To



Content

The purpose of this document is to explain how to establish a phone connection from your eWON to your PC using the callback feature of the eWON.

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Hardware and software requirements

Hardware requirements

In order to follow this guide you will need:

- 1 eWON with integrated modem (for example : eWON 2001 PSTN)

Software requirements

eWON configuration software:

The eWON is configured through its web server. So all you need is a standard Web Browser software like Internet Explorerⁱ or Firefoxⁱⁱ.

Additionally we suggest you to download the eBuddy utility on our website :

<http://support.ewon.biz>.

This utility allows to list all the eWONs on your network and to change the default IP address of an eWON to match your LAN IP address range. With eBuddy you can also easily upgrade the firmware of your eWON (if required).

Other programming software:

N/A

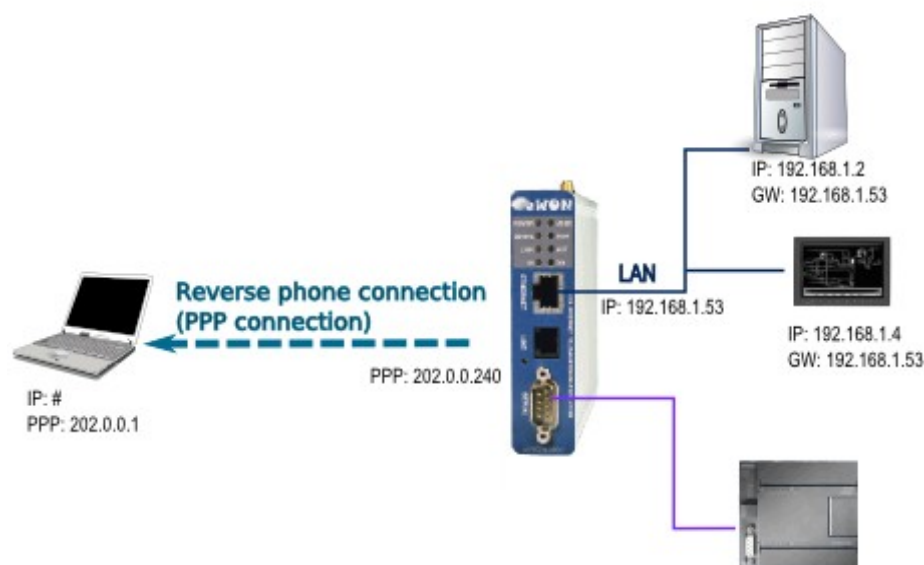
eWON Firmware Version

To be able to follow this guide your eWON needs a firmware version 5.0 or higher. A simple way to realize the eWON firmware upgrade is to use eBuddy, the eWON software companion.

Introduction

Your eWON has a callback feature. If this feature is enabled, then the eWON can be triggered by an external event in order to call a given phone number and establish a PPP link.

This gives the opportunity to let the eWON's phone line pay for the call, with a budget maintained by the eWON itself. This also ensures more security if you are calling back a private server.



In this document we will see how to reach your eWON and device(s) from your PC through a standard telephone line.

Here are the steps to make a remote connection work:

- Configure your PC to accept incoming calls
- Configure your eWON for callback
- Configure the outgoing PPP connection on the eWON

If you want to reach a device connected to the Ethernet port of your eWON:

- Create a route on your PC in order to reach the device(s) behind the eWON
- Set the eWON LAN address as default gateway on the devices

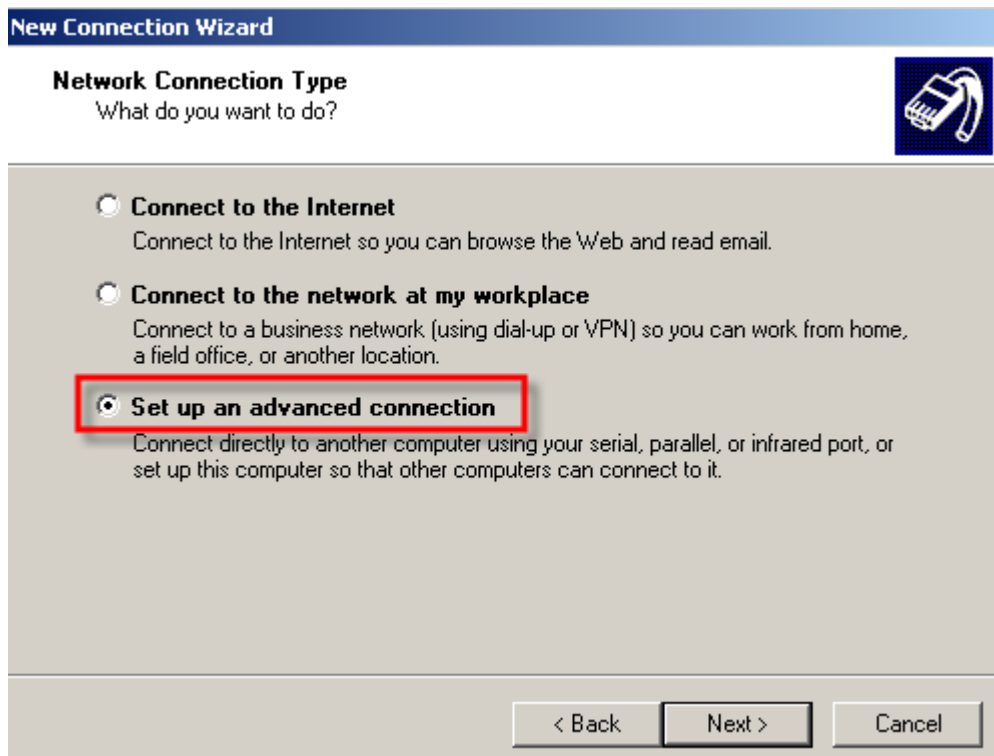
PC Configuration

For your eWON to reach your PC, you will have to configure the incoming connection settings of your PC. If not, the connection will be impossible.

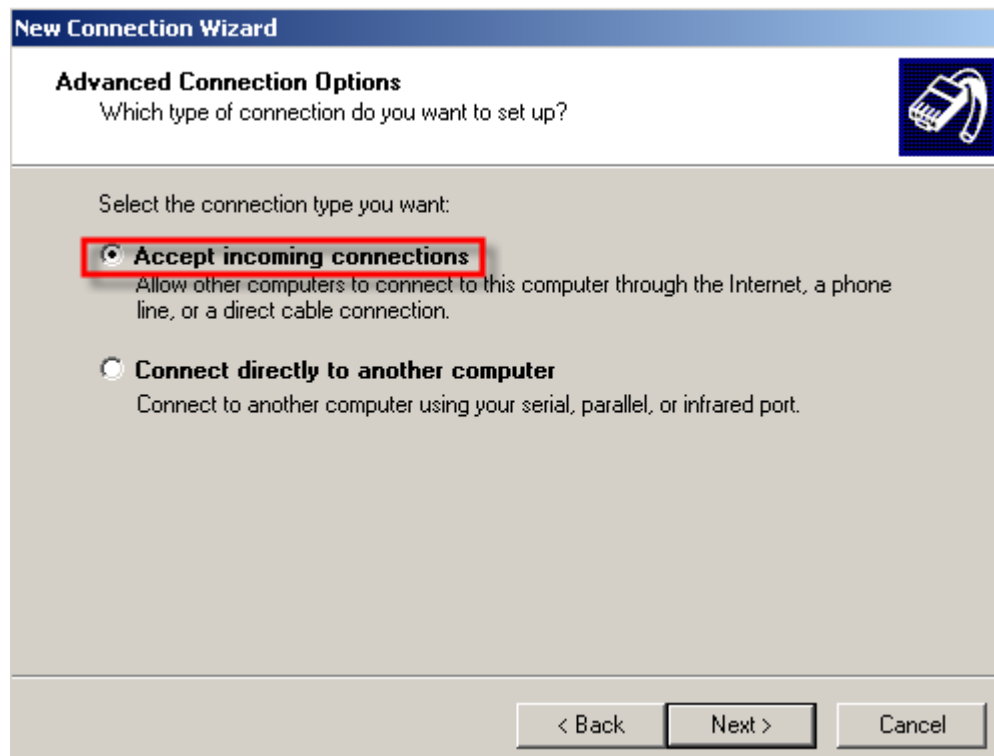
Click on **Start / Settings/ Network Connections/ New Connection Wizard** (or open your PC's **Control Panel** and click on **Network Connections**). The following window will open:



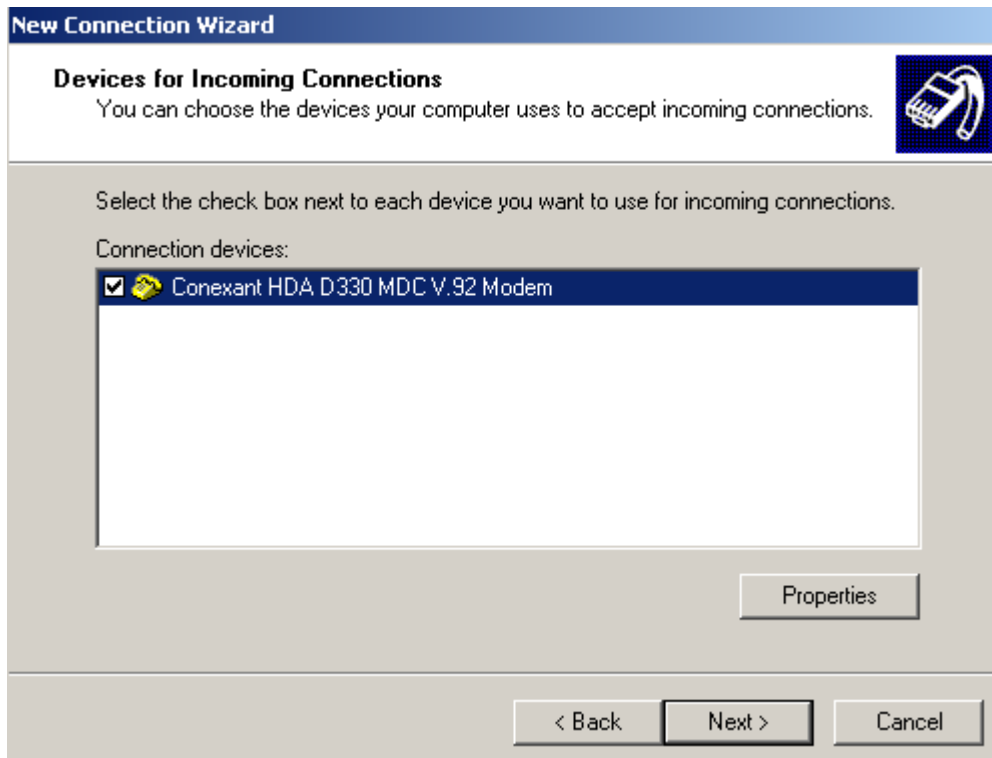
Click on *Next* and select *Set up an advanced connection*.



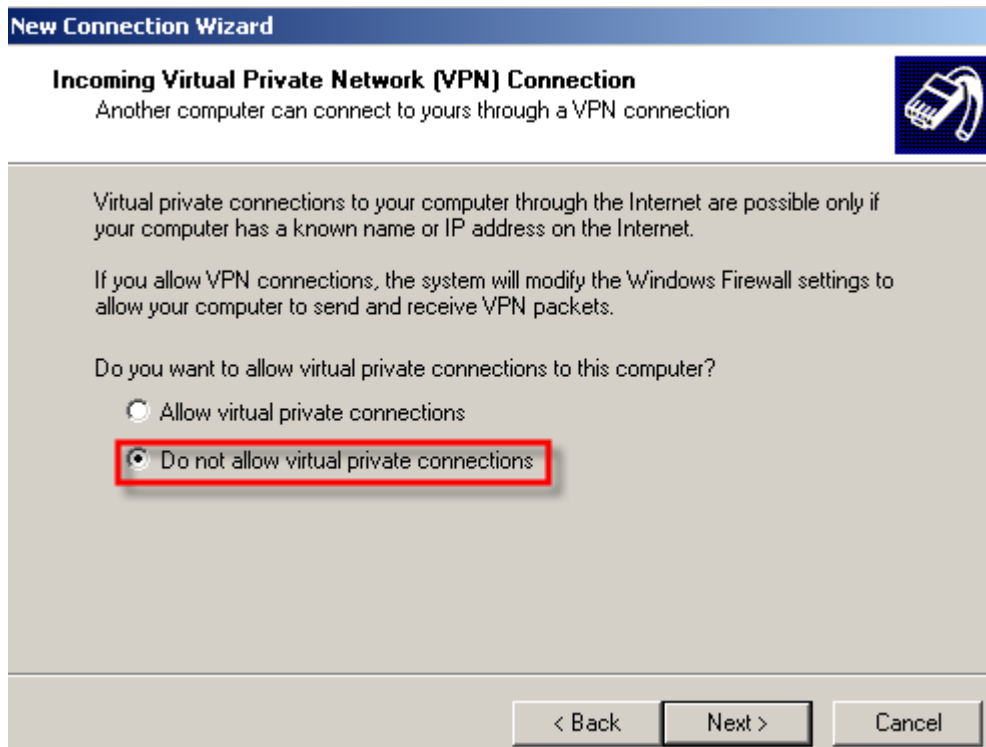
Click on *Next* and check *Accept incoming connections*.



Click on *Next* and select *the modem that you want to use for incoming connections*.

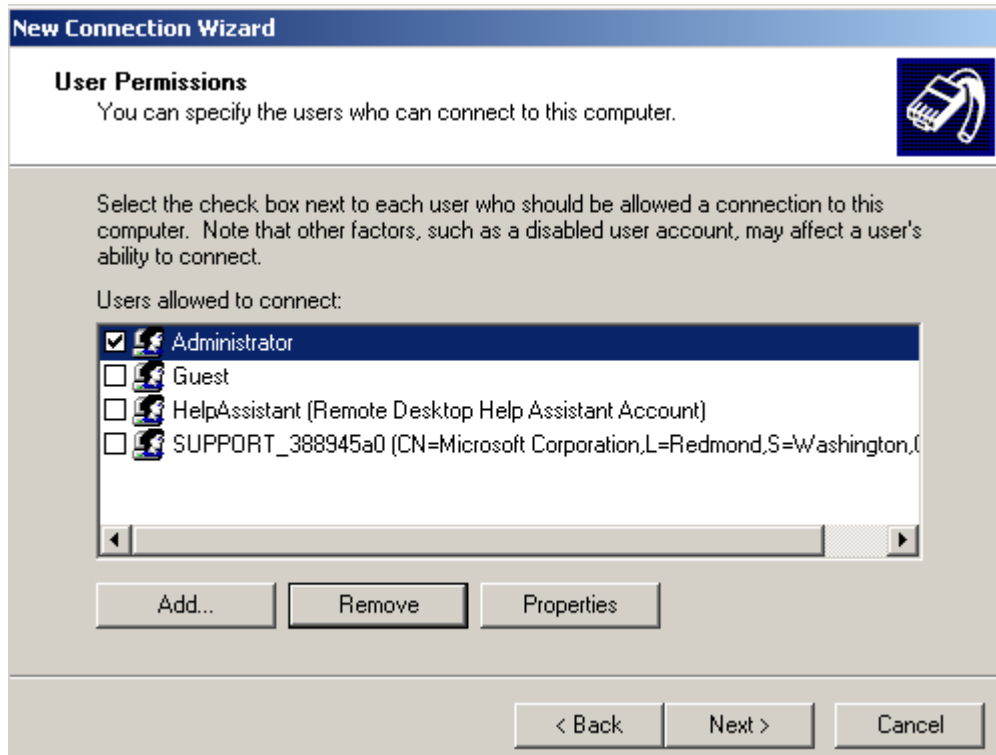


Click on *Next* and select *Do not allow virtual private connections*.




Click on *Next*.

3. PC Configuration

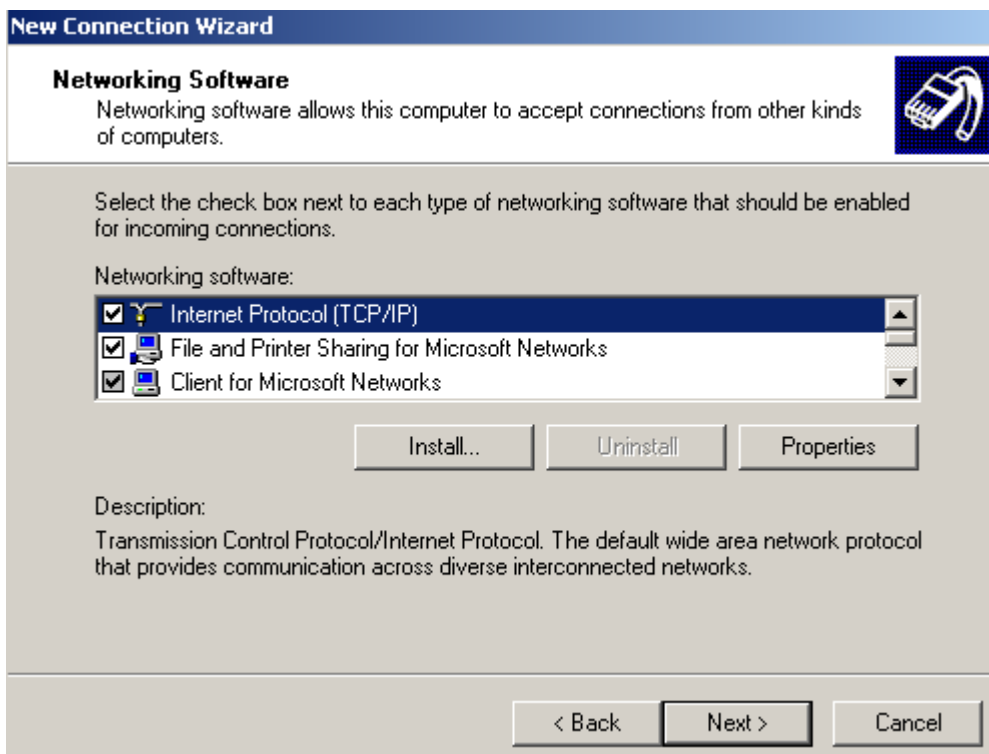


You will have to select the PC user having the right to make a PPP connection on the PC. The user and password of this account must then be used for the eWON PPP connection. Click on *Next*.

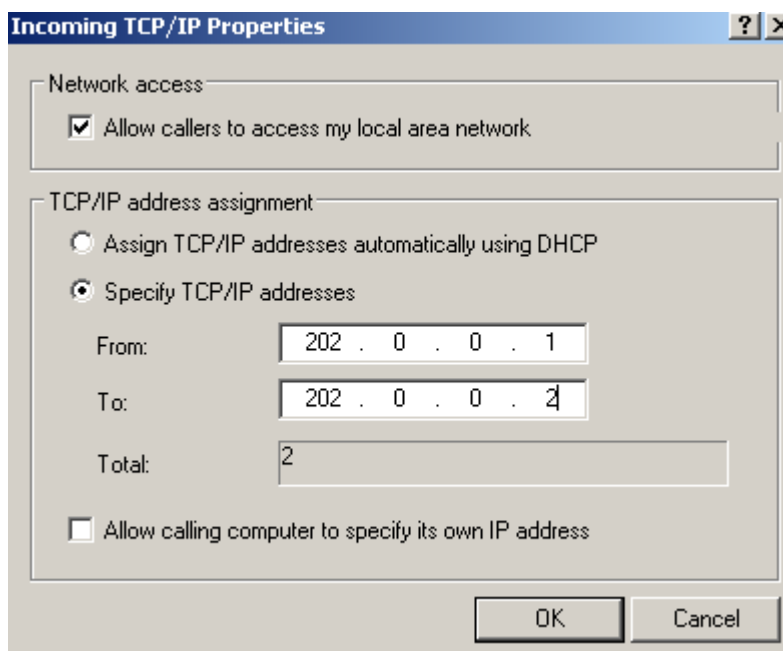
NOTE Be aware that some factors, such as insufficient user's rights, may affect a user's ability to connect. So, it is better to choose a user with administrator rights on your PC.



The following box is displayed:



Select the *Internet Protocol (TCP/IP)* and click on *Properties*:



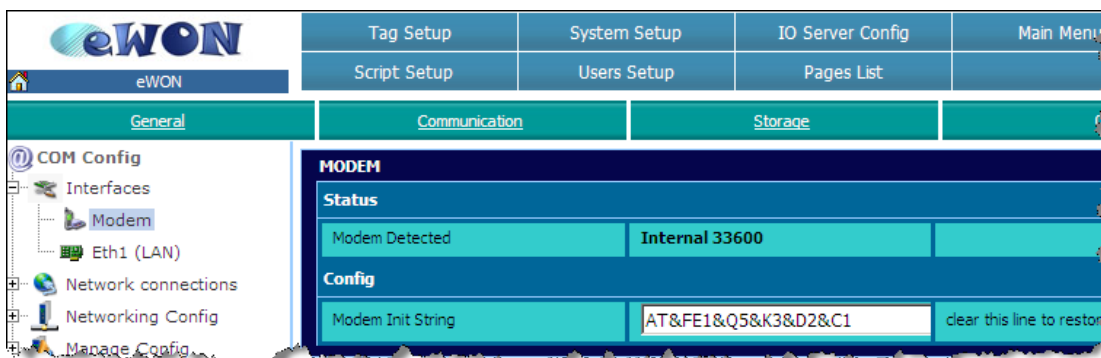
Here, select *Specify TCP/IP addresses* and insert them. Use 202.0.0.1 and 202.0.0.2. There is no need to change them. The most important thing is that they must be incompatible with the other IP addresses (PC, eWON, etc.). Besides, specifying the IP address manually, it will be easier to add the adequate route later on your PC.

Finally click on *Next* and *Finish*.

eWON Configuration

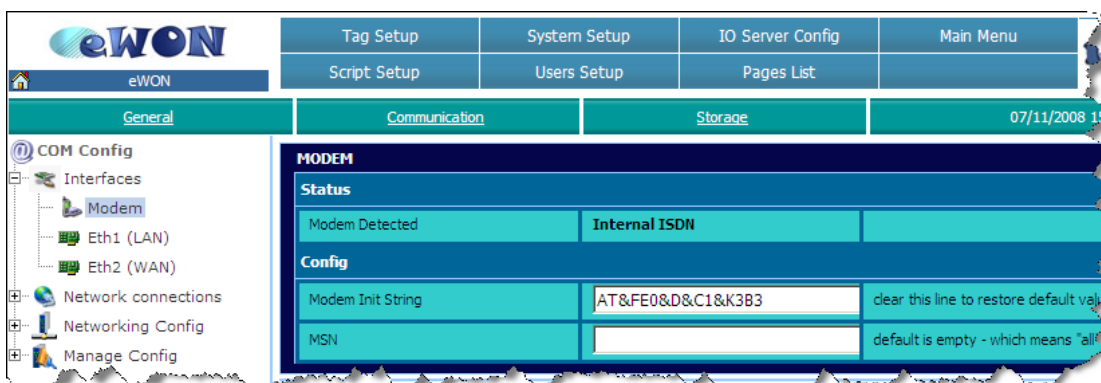
Modem Configuration

PSTN Modem Configuration



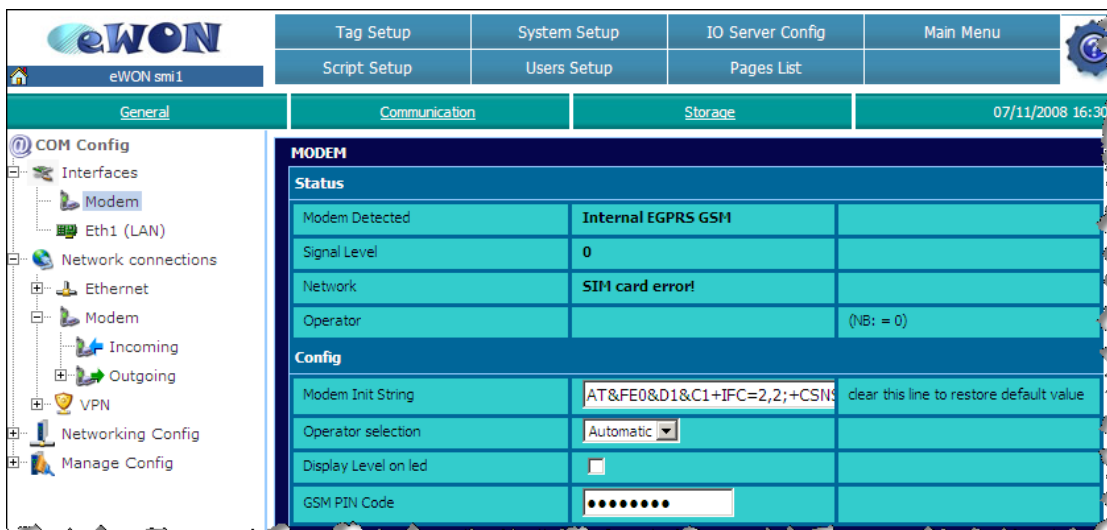
Let the **Modem Init String** unchanged. You might need to adapt it only to fit your local telephone requirements on some special situations.

ISDN Modem Configuration



Let the **Modem Init String** unchanged. If needed, you may insert the identification number of your line in the **MSN** field.

GSM data Modem Configuration



Let the **Modem Init String** to its default value. Insert the **PIN Code** of your SIM card.

NOTE



Reboot your eWON for your PIN code to be applied.

In the **Operator selection** field, you can choose if your mobile phone operator should be allocated automatically or forced.

The other fields (upper part) cannot be modified, they only give you status information:

- The **Modem Detected** field displays the textual description of the eWON internal modem detected.
- The **Signal Level** field shows the current signal level for your GSM/GPRS communication. The signal level must be between 20 and 31 (signal levels below 18 could work, but the communication could be slower or even interrupted). If you get 0 or 99, check you local environment and your antenna isolation/power.
- The **Network** field indicate if you are able to connect to the GSM/GPRS network. You should read «**Home Network**» (when you are in your country) and «**Roaming**» (when you are abroad) to communicate safely.
- The **Operator** field displays the current GSM provider that you are using.

Callback Configuration

Configuration → System Setup → Communication → Networking Config Callback

Thanks to the **Callback** feature, you can ask the eWON to call you back.

To configure your eWON, you will have to follow several steps. First of all, go to the **Callback** configuration page:

Check the **Callback enabled** box, the following page opens:



Select a **Callback mode**. You have two options: **On Ring** and **On user's request**. Make your choice and click on the **Update** button.

On ring: call your eWON, let ring a certain number of times and it will call you back.

On user's request: Make a dial-up connection on the eWON and trigger the callback manually.

On ring

Configuration → System Setup → Communication → Network connections → Callback

If you select **On Ring** as callback mode, you will have to set the **Number of Rings** (the number of rings before the eWON callback function is triggered).

4. eWON Configuration

The screenshot shows the eWON configuration interface. The top navigation bar includes 'Tag Setup', 'System Setup', 'IO Server Config', and 'Main Menu'. Below this is a secondary navigation bar with 'Script Setup', 'Users Setup', and 'Pages List'. The main content area is divided into 'General', 'Communication', and 'Storage' tabs. The 'Communication' tab is active, showing the 'Callback setup' page. The page has a checkbox for 'Callback enabled' which is checked. Below this is a 'General' section with several fields: 'Callback delay' (30 seconds), 'Wait for user login for' (1200 seconds), 'Dialup account' (Primary dialup server), and 'Publish IP address' (Disabled). There is also a 'Callback mode' dropdown set to 'On RING'. At the bottom, there are fields for 'Number of RINGS' (5) and 'Plus number of RINGS then On Hook' (10). An 'Update' button is at the bottom right.

In this case, when you call the eWON, let ring a certain number of times (in our example min. 5 rings and max. 15 rings) and hang up. The eWON will call you back. Be aware that if you do not hang up before 15 rings, the eWON will pick up the line.

Set the **Callback delay** i.e. the seconds that the eWON will wait before calling back once the callback is triggered. The **Wait for user login for** corresponds to the seconds that the eWON will maintain the PPP connection for the user to log in. If the user does not log in within this time, the eWON will drop the outgoing connection. The **Dialup account** list box allows to choose the server used for the callback: **Primary dialup server**, **Secondary dialup server**. The **User's request account** cannot be used for the callback mode **On Ring**.

Go now to the **PPP outgoing Connection** page:

Configuration → **System Setup** → **Communication** → **Network connections** → **Modem** → **Outgoing** → **Global**

Enable the **PPP outgoing Connection**. This action will open the **Global outgoing connections** parameters.

4. eWON Configuration

General Communication Storage 10/12/2008

COM Config

- Interfaces
- Network connections
 - Ethernet
 - Modem
 - Incoming
 - Outgoing
 - Global
 - Server1
 - Server2
- VPN
- Networking Config
- Manage Config

PPP outgoing Connection Enabled

Global outgoing connections parameters

Dial and connection timeout	180	seconds	
Enable protocol compression	<input checked="" type="checkbox"/>		
Delay between dialout retries	60	seconds	
Maximum connection time			
Idle time before hanging up	120	seconds	Minimum 60 seconds
Max outgoing call duration	60	minutes	0 for no limit
Hangup if no outgoing action after	-1	minutes	-1 to hangup after idle time
Error recovery			
Select next server in case of error	Use only server 1		
Reboot modem after	4	outgoing call failures	
Minimum GPRS connection duration	4	seconds	
Reboot GPRS modem after	5	connection(s) shorter than min. GPRS duration	
Calls budget management			
Allocated budget	24	hours	0 for no limit
Reset budget period	168	hours	
Current budget period: 23:49:25		hours	Leave empty for 'no change'
Volume: IN: 41232, OUT: 47280, Last reset: 01/01/1970 00:00:00	<input type="checkbox"/> Reset		Reset volume monitoring counters

Update

As you can see the default **Idle time before hanging up** is 120 seconds (so, once you are logged, the eWON hangs up after 120 seconds of inactivity). On the other hand, the **Max outgoing call duration** is 60 minutes, i.e. the eWON hangs up after 60 minutes, even if you are working on it. Select **Use only server 1** in the **Select next server in case of error** field. Of course, you can adapt those parameters according to your needs.

Simply click on the **Update** button.

To configure the Primary Dialup Server (**Server 1**), open the following page:

Configuration → System Setup → Communication → Network connections → Modem → Outgoing → Server 1

General Communication Storage 13/11/2008 16:51

COM Config

- Interfaces
- Network connections
 - Ethernet
 - Modem
 - Incoming
 - Outgoing
 - Global
 - Server1
 - Server2
 - Networking Config
 - Internet Connection
 - Publish IP Address
 - Callback
 - Routing

PPP outgoing Connection - Server 1

Server access setup

Server phone number	123456789	
User name	Administrator	
Password	••••••••	
Require secure authentication (CHAP)	<input checked="" type="checkbox"/>	Otherwise allow PAP (password is sent in clear text)

Configuration common to all servers (summary) - editable in global outgoing configuration

Dial and connection timeout	180	seconds
Enable protocol compression	<input checked="" type="checkbox"/>	
Idle time before hanging up	120	seconds

Update

4. eWON Configuration

In the **Server phone number**, insert the phone number of your PC, the **User name and Password** of the incoming connection on your PC created earlier.

Do not check the **CHAP** box.

On user's request

If instead of callback **On ring**, you choose the **On user's request** as callback mode, the eWON will wait until the user logs in and triggers manually the callback request.

**Configuration → System Setup → Communication → Networking Config
Callback**

The screenshot shows the eWON web interface. At the top, there is a navigation bar with 'Tag Setup', 'System Setup', 'IO Server Config', and 'Main Menu'. Below this is a secondary bar with 'Script Setup', 'Users Setup', and 'Pages List'. The main content area is titled 'Callback setup' and has a 'Callback enabled' checkbox checked. The 'General' section contains the following fields:

Field	Value	Unit
Callback delay	30	seconds
Wait for user login for	1200	seconds
Dialup account	Primary dialup server	
Publish IP address	Disabled	

At the bottom of the form, there is a 'Callback mode' dropdown menu set to 'On user's request' and an 'Update' button.

Set the **Callback delay** i.e. the seconds that the eWON will wait before calling back once the callback is triggered. The **Wait for user login for** corresponds to the seconds that the eWON will maintain the PPP connection for the user to log in. If the user does not log in within this time, the eWON will cut the outgoing connection.

The **Dialup account** list box allows to choose the server used for the callback:

Primary dialup server, Secondary dialup server: those options allow the user to trigger a callback towards the phone number of Server 1 or Sever 2 and **User's request account:** this option allows the user to call number defined by the user himself.

We need now to specify if the User who connects to the eWON may trigger the callback or not. Go to the **User Setup** page:

Configuration → User Setup

Delete Selected Users		Create New User	
User Login	First Name	Last Name	Rights
<input type="checkbox"/> Adm			voacfe

4. eWON Configuration

Callback		
Enabled	<input checked="" type="checkbox"/>	Callback must also be globally enabled in System Config
Callback phone number value is	Mandatory	Defines if user can change phone number
Callback phone number	123456789	User's login and password are used to connect to server

Once you have clicked on the User, check the **Callback Enabled** check box, indicate if the **Callback phone number value** will be **Mandatory** or **User Defined**. If the **phone number value** is **User Defined**, the user will be able to modify the **Callback phone number** (see p.17). If you choose **Mandatory**, the user will not be able to change the phone number. Besides, specify the phone number that your eWON should call.

Finally,click on **Add/Update**.

Callback Request

On ring

If you have previously configured the eWON **Callback mode** to use the **On ring** (which is more convenient), all you have to do is call your eWON by phone. Depending on the **Number of RINGS** and **Plus number of RINGS then On Hook**, hang up after a certain number of rings for your eWON to call your PC back.

In the below example, you will have to wait 2-7 rings before hanging up for the eWON to call back. If you do not hang up before 7 rings, the eWON will pick up.

Callback mode:	On RING
Number of RINGS	2
Plus number of RINGS then On Hook	5
Update	

On user's request

If you have configured the eWON **Callback mode** to use the **On user's request**, you must first connect to the eWON through the PPP connection (for more information on the dial-up connection, please refer to our document **AUG-013** on <http://support.ewob.biz>).

According to the **Dialup account** you chose in the **Callback mode: Primary, Secondary or User's request** the eWON homepage will vary.

If you have selected **Primary server**, the following window will open:

View I/O	Alarm Summary	Diagnostic	Configuration
	Alarm History	Files Transfer	Log off

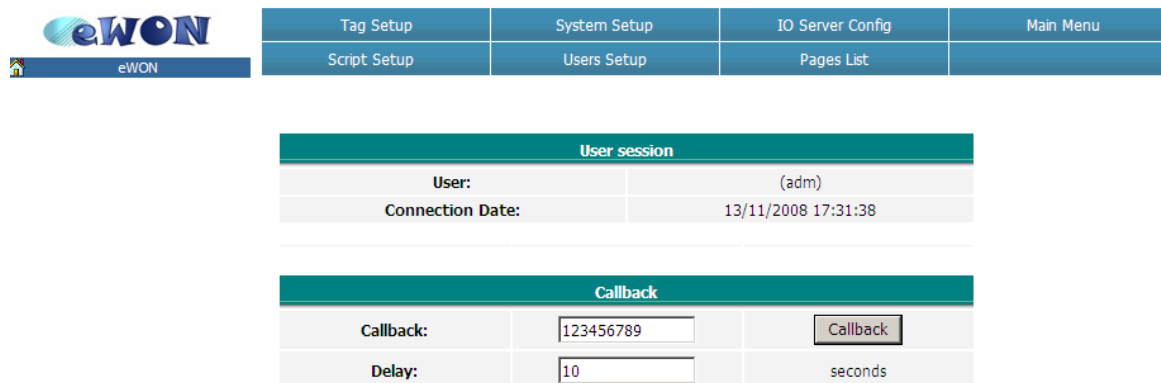
User session	
User:	(Adm)
Connection Date:	29/10/2008 11:33:28

Callback	
Callback:	Primary Dialup Server <input type="button" value="Callback"/>
Delay:	1 <input type="text"/> seconds

5. Callback Request

From this page, you can only modify the **Delay** parameters (the number of seconds that the eWON will wait before calling once the callback has been triggered). To trigger a callback from your eWON simply click on the **Callback** button. The eWON will call the phone number defined for the **Primary Server**.

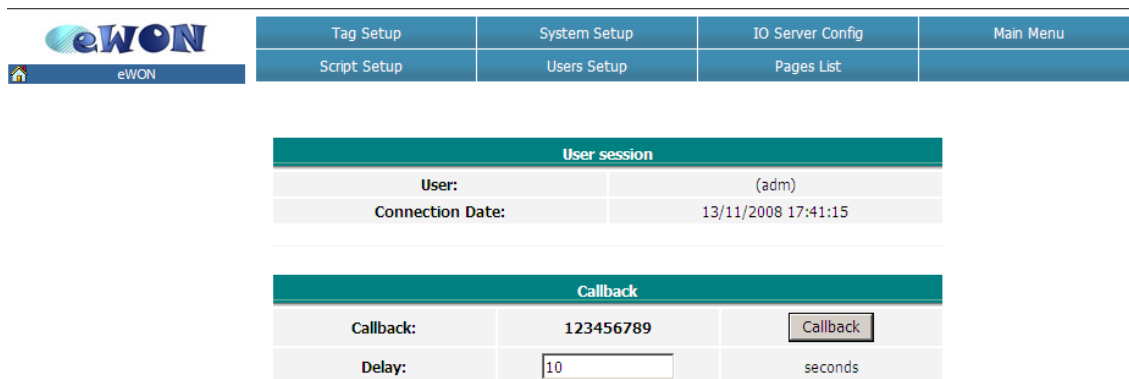
If you have selected **User's request**, the following page will be displayed.



The screenshot shows the eWON web interface. At the top left is the eWON logo. To its right is a navigation menu with four columns: 'Tag Setup', 'System Setup', 'IO Server Config', and 'Main Menu'. Below this menu are four buttons: 'Script Setup', 'Users Setup', 'Pages List', and 'Main Menu'. The main content area is divided into two sections. The first section, titled 'User session', shows 'User: (adm)' and 'Connection Date: 13/11/2008 17:31:38'. The second section, titled 'Callback', shows 'Callback: 123456789' with a 'Callback' button next to it, and 'Delay: 10' with 'seconds' next to it.

In this case, you can see the phone number that your eWON will call and you can still modify it before triggering the call.

If the logged user has selected **Mandatory** instead of **User defined**, the following page will be displayed.




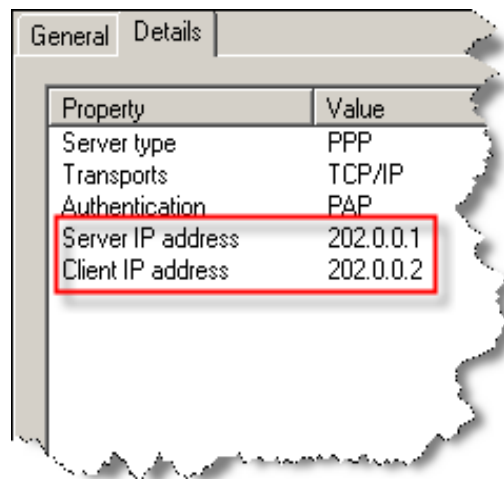
The screenshot shows the eWON web interface. At the top left is the eWON logo. To its right is a navigation menu with four columns: 'Tag Setup', 'System Setup', 'IO Server Config', and 'Main Menu'. Below this menu are four buttons: 'Script Setup', 'Users Setup', 'Pages List', and 'Main Menu'. The main content area is divided into two sections. The first section, titled 'User session', shows 'User: (adm)' and 'Connection Date: 13/11/2008 17:41:15'. The second section, titled 'Callback', shows 'Callback: 123456789' with a 'Callback' button next to it, and 'Delay: 10' with 'seconds' next to it.

In this case, you can see the phone number that the eWON will use for the callback, but you cannot change it.

Connection Establishment


Connection between your eWON and the PC

Once the eWON has established a PPP connection to your PC, click on the small icon  in the task bar to make the connection properties appear. The *Server IP address* is your PC address and the *Client IP address* is the address of your eWON.



So the eWON is reachable at address 202.0.0.2.

Closing Connection

When you want to close the PPP connection, do it through the eWON Homepage . If you close the connection from the PC side, the eWON will try to call back again as it will consider the closing as an interruption of the line.

User session		
User:	(adm)	
Connection Date:	09/12/2008 16:43:07	

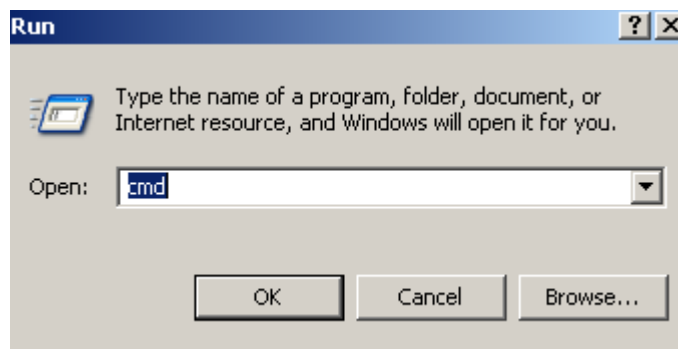
Callback		
Callback:	Primary Dialup Server	<input type="button" value="Callback"/>
Delay:	<input type="text" value="10"/>	seconds

Close Curent Connexion
<input type="button" value="Close PPP Connexion"/>

Connection between the PC and the devices

For your PC to communicate with the devices behind the eWON, you will have to tell your PC that to connect to the devices, it has to pass through the phone line. To do so, you need to add a route on your PC. Bear in mind that for devices plugged in the serial port, you do not need to add a route if you use the PPP address 202.0.0.2.

To open the DOS window on your PC, click on *Start/ Run*, the following box opens:



Type «cmd» and then *OK*.

Make a «route print» to get the interface used by the phone connection:

```
C:\WINDOWS\system32\cmd.exe
C:\Documents and Settings\smi>route print
=====
Interface List
0x1 ..... MS TCP Loopback interface
0x2 ...00 1d 09 d6 77 17 ..... Broadcom NetXtreme 57xx Gigabit Controller - Packet Scheduler Miniport
0x3 ...00 1f 3b d9 4e 57 ..... Intel(R) Wireless WiFi Link 4965AGN - Packet Scheduler Miniport
0x4 ...00 ff db b5 a5 54 ..... TAP-Win32 Adapter U8 - Packet Scheduler Miniport
0x10005 ...00 53 45 00 00 00 ..... WAN (PPP/SLIP) Interface
=====
```

If we follow our example, the route to add would be:

```
route add 192.168.1.0 MASK 255.255.255.0 202.0.0.2 IF 0x10005.
```

Troubleshooting

The eWON cannot establish a PPP connection to the PC

- Check the user name and password for the PPP connection. They *must* be a PC's valid user name and password.
- Make sure that the *Require secure authentication (CHAP)* has not been enabled in the **Server 1** settings.

The PC cannot connect to the devices behind the eWON

- The devices linked to the eWON *must* have the LAN IP address of the eWON they are connected to as default gateway.
- The PC and devices behind the eWON *must* be on a different network range, otherwise the routing is not possible. To avoid routing problems, disconnect the local network cable of your PC before adding the route on your PC.
- Make sure that you have added a route on your PC.

Revisions

Revision Level	Date	Description
1.0	2008-12-16	First release.

- i Microsoft, Internet Explorer, Windows and Windows XP are either registered trademarks or trademarks of Microsoft Corporation
- ii Firefox is a trademark of the Mozilla Foundation

Document build number: 132

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